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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/517,426	03/02/2000	Veltmans Wilhelmina Helena Maria	5475.00	4911

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1001 Pennsylvania Avenue NW
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EXAMINER

MILLER, EDWARD A

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 12/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/517,426

Applicant(s)

MARIA ET AL.

Examiner

Edward A. Miller

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2002.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because: It does not identify the foreign application for patent or inventor's certificate on which priority is claimed pursuant to 37 CFR 1.55, and any foreign application having a filing date before that of the application on which priority is claimed, by specifying the application number, country, day, month and year of its filing. The declaration does refer to, and claim priority based on, an application filed in the U.S.A. The USA is not a country foreign to the USA, and the format of the serial number does not match that used in the USA.

In a paper filed January 24, 2001, applicant mentions an European application having the same serial number as stated in the declaration for an USA application, but no copy of a priority EPO application is found in the instant application file.

3. Claims 28-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Subramanian et al. in view of Mangum et al., and Somoza et al. I and II.

Subramanian et al. teach the basic invention of particle precipitation to form small size particles. Therein, as in the Abstract, precipitation is performed to form small crystals with the benefit of ultrasonic waves. Ultrasonic background is given from about col. 3, line 37- col. 4, line 39, with further detail in the paragraph bridging col. 5 and col. 6. Col. 4, lines 52-62 (line 62 specifically teaching explosives), and col. 17, lines 48-56 (line 56 teaching explosives), make it clear that the invention method is useful to make small size crystals of explosive ingredients. Further detail is taught throughout Subramanian et al., including in Example 12, with specific ultrasonic

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detail. In view of Mangum et al., and Somoza et al. I and II, it would have further been obvious to prepare specific notoriously well known explosive ingredients by such a crystallization process. In Mangum et al., col. 3, lines 30-45, ammonium perchlorate is crystallized in small sizes with ultrasonic energy, with variation of process parameters to vary the results. Note Mangum et al. Example 5, col. 8. In Somoza et al. I, col. 2, lines 8-49, use of ultrasonic energy during grinding is helpful to remove impurities from crystal surfaces to produce an improved product, and in Somoza et al. II, the Abstract, e.g., teaches that small size particles are less sensitive. Thus, it is perfectly clear that these processes will produce a beneficial product with small size, improved purity and reduced sensitivity. Variation of specific notoriously well known ingredients, or variation of well known parameters would have been obvious for the expected reasons taught in the references. It is well settled that optimizing a result effective variable is well within the expected ability of a person or ordinary skill in the subject art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

Applicants' arguments are not persuasive of error. As to additional details such as using a supercritical anti-solvent, the scope of the instant claims, e.g., "comprising", allows any such additional possibilities. As to the allegations regarding improved properties, where the product appears to be the same or only slightly different, the properties recited would appear to be inherent, regardless of the method of preparation. The frequencies and precipitation of energetic materials is taught. Thus, the same results must be obtained. In any event, the Office does not have testing facilities to determine such. The burden falls on applicant to show that the prior art products do not necessarily or inherently possess the claimed properties. *In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966; *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596; *In re Best*, 562 F.2d 1252, 1255; 195 USPQ 430, 433-434; *In re Brown*, 459 F.2d 531, 173 USPQ 685. Particularly, as to such improved

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results, attorney arguments are not a proper substitute for a factual showing, related to the properties alleged, and the claim terms. *In re De Blauwe*, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984), "It is well settled that unexpected results must be established by factual evidence." Also see *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). See MPEP 716-716.02(e), including the nexus requirement and the showing be comparable in scope with the claims terms.

4. Claims 28-33 are rejected under 35 U.S.C. 103(a) as unpatentable over Markels et al.

Note Examples I, II and IV in col. 4, for example. The concrete limitations of the claims appear met, except for amplitude, the functional result or properties would appear to be obtained. To the extent necessary, variation of a specific ultrasonic apparatus detail such as amplitude would have been obvious and a mere matter of routing optimization. See the case law cited above.

5. Claims 28-33 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described or enabled in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In this case, the examples appear to deal solely with HNF. From Zee et al., HNF is an atypical energetic material, compared to other such materials. Thus, particular procedures were required to obtain stable HNF as taught therein, which was contrary to the prior art at that time, as related to HNF. Indeed, it may appear that the HNF product of Zee et al. would be superior to regular HNF, not according to Zee, processed by applicants' process. Thus, the specification is deemed to fail to disclose or teach a reasonable range of substances and reaction conditions and parameters with which the claimed invention works as described and claimed. See MPEP 2164.06(b)-2164.08. Also compare *In re Surrey*, 151 USPQ 724 (CCPA 1966), where representative examples are required. This would particularly be the case where applicant has very broad claim

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scope, but very narrow exemplary support, and the claims are alleged to operate contrary to the teachings of the prior art, while the claims cover that or those (indeed, all energetic materials) energetic material(s) taught in the references, while the specification examples are only to HNF. This also includes the specific amplitudes alleged, which also may only be operative for HNF, as to any criticality. After all, the prior art suggests variation of such parameters in any event, which mitigates against criticality. Further, note Bescond et al. and Johnson et al., which further show critical parameters as to CL-20 production, crystallization. Without seeding with epsilon polymorph CL-20 and critically water removal, recrystallization may result in a less preferred polymorph or mixture thereof. Thus, morphology will not be improved, and the practice of this invention is not enabled by a representative number of examples, as previously stated. Even though the statute does not use the term “undue experimentation,” it has been interpreted to require that the claimed invention be enabled so that any person skilled in the art can make and use the invention without undue experimentation. *In re Wands*, 858 F.2d at 737, 8 USPQ2d at 1404 (Fed. Cir. 1988).

6. Claims 28-33 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection. In claims 28 and 31, the “amplitude” limitation lacks proper basis. In original claim 5, e.g., this relates to the ultrasonic probe. The relationship of this limitation to other parts of the apparatus or zones or streams in the process is not perfectly clear of disclosed. Thus, this phrase as currently written lacks original basis and is new matter.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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8. Claims 28-33 are rejected under 35 U.S.C. 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter applicant regards as the invention.

It is not clear what the "amplitude" limitation relates to. Does the crystallizing mixture have an amplitude? Is this an amount of vibration? How does one part of a continuous medium have an amplitude of some microns, distinct from the remainder of the medium? Does this repeal the inverse square law for energy and distance in a medium? There is no antecedent basis for this language. Could amplitude relate to the later recited "zone"? This cannot be understood. In line 9 of claim 28, the "continuously" requirement is also indefinite. It is not clear if this relates to a continuous process, or if this is a continuous passing when crystallizing. This is compounded because in line 6, harvesting after crystallization may comprise a batch process limitation.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning either this or an earlier communication from the Examiner should be directed to Examiner Edward A. Miller at (703) 306-4163. Examiner Miller may normally be reached Monday-Thursday, from 10 AM to 7 PM.

If attempts to reach Examiner Miller by telephone are unsuccessful, his supervisor Mr. Carone can be reached at (703) 306-4198. The Group fax number is (703) 305-7687.

If there is no answer, or for any inquiry of a general nature or relating to the application status, please call the Group receptionist at (703) 308-1113.

Miller/em
December 26, 2002


EDWARD A. MILLER
PRIMARY EXAMINER